



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Group Art Unit 1762

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In re

Reissue Patent Application of

Karl-Hermann Friese, et al.

Serial No. 09/918,901

Confirmation No. 2348

Filed: July 31, 2001

Examiner: Michael E. Barr

PROCESS OF APPLYING
MATERIAL, IN PARTICULAR
FOR THE PRODUCTION OF
ELECTRODES FOR EXHAUST GAS SENSORS

I, Victoria K. Hanson, hereby certify that this correspondence is being deposited with the US Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on the date of my signature.

Alexandria, VA 22313

Victoria K. Hanson
Signature

May 13, 2003
Date of Signature

**STATEMENT ACCOMPANYING DECLARATION SUBMITTED AFTER FINAL
REJECTION PURSUANT TO 37 CFR 1.116(c)**

Assistant Commissioner for Patents
Washington, D.C. 20231 PO Box 1450
Alexandria, VA 22313
Sir:

This is a statement pursuant to 37 CFR 1.116(c) showing good and sufficient reasons why the accompanying Declaration of John Day, which is being submitted pursuant to 37 CFR 1.132 and after final rejection, is necessary to the prosecution of the application and was not earlier presented. The declaration was not presented earlier because the Applicants believed, and consequently still believe, that the arguments made in the previous response were entitled to consideration. In his final rejection, the Examiner has specifically requested a factual showing of the points made in the previous response, and in the telephone interview conducted with the Examiner on April 16, 2003, the Examiner indicated that a declaration would be proper and would be considered in responding to the final rejection.

For these reasons, the Applicants respectfully request acceptance of this statement and entry of the Declaration of John Day.

Respectfully submitted,



Richard L. Kaiser
Reg. No. 46,158

File No. 81276/9058

Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Milwaukee, WI 53202-4108
Phone: (262) 956-6576

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"PROCESS OF APPLYING MATERIAL, IN
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Alexandria, VA 22313

Victoria K. Hanson
Signature

May 13, 2003
Date of Signature

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5/21/03

DECLARATION OF JOHN DAY UNDER 37 C.F.R. §1.132

~~Assistant Commissioner for Patents~~
~~Washington, D.C. 20231~~

PO Box 1450

Dear Sir:

Alexandria, VA 22313

I, John Day, declare as follows:

1. I am an employee of Robert Bosch Corporation, where my title is "Team Leader – AdW/EOP3 Oxygen Sensor Ceramic Development."
2. I have been involved in the design and manufacture of exhaust gas sensors for 6 years, and have been involved in working with ceramic materials for 25 years.
3. The above-referenced reissue patent application is owned by Robert Bosch GmbH, the parent company of my employer.
4. It is my understanding that the Examiner reviewing the above-referenced reissue patent application has rejected certain claims on the basis that the terminology used in the claims is not supported by the terminology used in the specification of the reissue application. Specifically, the Examiner has stated that the specification, which describes the use of a "ceramic carrier," does not support the term "solid electrolyte member" used in the claims. Additionally, the Examiner has stated that "the Applicant has not shown or established that in the context of gas sensors that the ceramic member has to be a solid electrolyte. While it can be shown that

some ceramics are solid electrolytes in gas sensors, it is not shown that any ceramic used in the gas sensor must be a solid electrolyte or even conductive. There is no indication in the specification or the prior art that this must be the case." It is therefore the Examiner's position that "one skilled in the art reviewing the present specification would have used a dielectric ceramic material to practice the present invention [rather] than a conductive one, as there is no direction provided to indicate the nature of the ceramic."

5. After reviewing pending claims 17-20, I note that claims 17-20 each contain reference to a solid electrolyte member.

6. After reviewing the specification of the reissue application, I note that the term solid electrolyte member is not used, but that instead, the term ceramic carrier is used.

7. Contrary to the Examiner's position, I submit that the term "ceramic carrier," as used in the context of exhaust gas sensors of the type disclosed in both the above-referenced reissue application and U.S. Patent No. 6,096,372 to Nomura, et al., is understood by those knowledgeable in exhaust gas sensor design to mean a solid electrolyte member. In other words, the terms "solid electrolyte member" and "ceramic carrier" are synonymous in the context of these exhaust gas sensor applications. This is because exhaust gas sensors of the type disclosed in both the above-referenced reissue application and U.S. Patent No. 6,096,372 to Nomura, et al. use cup-shaped members that must be electrically conductive, i.e., permitting the movement of ions therethrough.

The fundamental operating principle of exhaust gas sensors of the type disclosed in both the above-referenced reissue application and U.S. Patent No. 6,096,372 to Nomura, et al. requires the use of a conductive, solid electrolyte member. Therefore, the ceramic carrier discussed in the above-referenced reissue application must be a solid electrolyte member in order for the exhaust gas sensor to function. Those knowledgeable about exhaust gas sensors will understand this to be true.

For this reason, the term "solid electrolyte member" is supported by the term "ceramic carrier," as used in the above-referenced reissue application, to describe the cup-shaped member used in an exhaust gas sensor. Regardless of whether the cup-shaped member is called a ceramic carrier or a solid electrolyte member, the fact is that it must be made of a solid electrolyte material in order for the illustrated exhaust gas sensor to operate.

8. The most common material used by Robert Bosch Corporation and Robert Bosch GmbH to manufacture the cup-shaped ceramic carriers referred to in the reissue application is zirconium oxide (ZrO_2). ZrO_2 is both a ceramic material and a solid electrolyte material. Typically, the ZrO_2 is stabilized mechanically with yttria, which makes the ZrO_2 a better ionic conductor. Any cup-shaped members not made of ZrO_2 are made from other suitable solid electrolyte materials.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

7 May 2003
Dated

John Day
John Day

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Supplemental Declaration and Power of Attorney For Reissue Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a Reissue Patent is sought for the invention entitled "PROCESS OF APPLYING MATERIAL, IN PARTICULAR FOR THE PRODUCTION OF ELECTRODES FOR EXHAUST GAS SENSORS" (Attorney Docket No. 081276-9058-00), the original specification of which was filed, with my authority, on April 10, 1997 as Application Serial No. 08/827,679 and issued as U.S. Patent No. 6,074,694 ("the '694 Patent") on June 13, 2000. U.S. Application Serial No. 08/827,679 claimed the priority of German Patent Application Serial No. 1 96 14 147.8 filed in Germany on April 10, 1996. The corresponding reissue application was filed on July 31, 2001 as Application Serial No. 09/918,901.

I believe the original patent to be partly or wholly inoperative or invalid by reason of the patentee claiming less than the patentee had a right to claim in the patent.

One error being relied upon as the basis for reissue is that the applicants failed to include a claim drawn generally to a method of manufacturing an O₂ sensor element having a cup-shaped solid electrolyte member and including the steps of preparing a nozzle with a paste discharge hole for discharging conductive paste to form an inside electrode; inserting the front end of the nozzle into the solid electrolyte member; relatively rotating the paste discharge hole with respect to the solid electrolyte member while discharging paste onto the inside surface of the solid electrolyte member; removing the nozzle from the solid electrolyte member; and baking the solid electrolyte member. The applicants were entitled to a claim of this scope.

Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intent on the part of the applicants.

I hereby state that I have reviewed and understand the contents of the above-identified reissue application, including the claims added to the '694 Patent therein.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I have assigned my entire right, title, and interest to the '694 Patent to Robert Bosch GmbH. The assignment is recorded at reel 8760, frame 0502.

And I hereby appoint David R. Price (Reg. No. 31,557), Glenn M. Massina (Reg. No. 40,081), Leon Nigohosian, Jr. (Reg. No. 39,791), Mark A. Ussai (Reg. No. 42,195), Christopher B. Austin (Reg. No. 41,592), David L. De Bruin (Reg. No. 35,489), Gerald L. Fellows (Reg. No. 36,133), Joseph A. Gemignani (Reg. No. 19,482), Gregory J. Hartwig (Reg. No. 46,761), Daniel S. Jones (Reg. No. 42,697), Richard L. Kaiser (Reg. No. 46,158), Timothy M. Kelley (Reg. No. 34,201), Casimir F. Laska (Reg. No. 30,862), Edward R. Lawson Jr. (Reg. No. 41,931), Craig J. Loest (Reg. No. 48,557), Richard H. Marschall (Reg. No. 39,290), Raye L. Michlig (Reg. No. 47,933), Thomas A. Miller (Reg. No. 36,871), Kevin

P. Moran (Reg. No. 37,193), Thomas J. Otterlee (Reg. No. 48,652), Thomas S. Reynolds II (Reg. No. 45,262), Chad W. Shea (Reg. No. 48,470), Billie Jean Smith (Reg. No. 36,940), David B. Smith (Reg. No. 27,595), Derek C. Stettner (Reg. No. 37,945), Donald W. Walk (Reg. No. 29,118), Glen A. Weitzer (Reg. No. 48,337), Sheldon L. Wolfe (Reg. No. 43,996), Jill A. Fahrlander (Reg. No. 42,518), Grady J. Frenchick (Reg. No. 29,018), Jeffrey D. Peterson (Reg. No. 49,038), Sara Vinarov (Reg. No. 48,524), Jeffrey S. Ward (Reg. No. 32,774), Teresa J. Welch (Reg. No. 33,049), Charlene L. Yager (Reg. No. 48,887), Michael Best & Friedrich LLP; and Louis Altman (Reg. No. 19,373), Robert S. Beiser (Reg. No. 28,687), Lisa C. Childs (Reg. No. 39,937), Charles A. Laff (Reg. No. 19,787), William A. Meunier (Reg. No. 41,193), Larry L. Saret (Reg. No. 27,674), Martin L. Stern (Reg. No. 28,911), Barry W. Sufrin (Reg. No. 27,398), Marshall W. Sutker (Reg. No. 19,995), Sean S. Swidler (Reg. No. 49,033), Kevin C. Trock (Reg. No. 37,745), J. Warren Whitesel (Reg. No. 16,830), Jane Wright-Mitchell (Reg. No. 47,187), Robert A. Yesukevich (Reg. No. 36,064), Michael Best & Friedrich LLC, Victor Henzi (Reg. No. 45,447), R. Warren Comstock (Reg. No. 25,844), and each or any of them, my attorneys or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

ADDRESS ALL COMMUNICATIONS IN OR PERTAINING TO THIS APPLICATION TO:

David R. Price
Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Milwaukee, Wisconsin 53202-4108

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first joint inventor: Karl-Hermann Friese

Inventor's signature: Karl-Hermann Friese

Date: May 9, 2003

Residence: Leonberg, Germany

Citizenship: Germany

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Full name of second joint inventor: Siegfried Nees

Inventor's signature: Siegfried Nees

Date: 05/06/2003

Residence: Neckarwestheim, Germany

Citizenship: Germany

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Germany

Full name of third joint inventor: Frank Stanglmeier

Inventor's signature: _____

Date: _____

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Citizenship: Germany

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Full name of fourth joint inventor: Hans Baumann

Inventor's signature: _____

Date: _____

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Citizenship: Germany

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Germany

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Full name of second joint inventor: Siegfried Nees

Inventor's signature: _____

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Full name of third joint inventor: Frank Stanglmeier

Inventor's signature: Frank Stanglmeier

Date: 5/6/2003

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Full name of fourth joint inventor: Hans Baumann

Inventor's signature: _____

Date: _____

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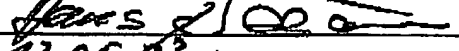
Full name of second joint inventor: Siegfried Nees

Inventor's signature: _____
Date: _____
Residence: Neckarwestheim, Germany
Citizenship: Germany
Post Office Address: Burgweg 11
74382 Neckarwestheim
Germany

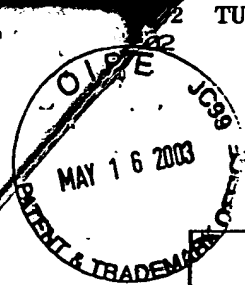
Full name of third joint inventor: Frank Stanglmeier

Inventor's signature: _____
Date: _____
Residence: Moeglingen, Germany
Citizenship: Germany
Post Office Address: Ellen-Key-Weg 8
71696 Moeglingen
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Full name of fourth joint inventor: Hans Baumann

Inventor's signature: 
Date: 12.05.03
Residence: Sternenfels, Germany
Citizenship: Germany
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75447 Sternenfels
Germany

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CONSENT OF ASSIGNEE

CERTIFICATE UNDER 37 CFR 3.73(b)

Applicant: Karl-Hermann Frieze, et al.

Application No.: 08/827,679 **Filed:** April 10, 1997

Entitled: PROCESS OF APPLYING MATERIAL, IN PARTICULAR FOR THE PRODUCTION OF ELECTRODES FOR EXHAUST GAS SENSORS

Robert Bosch GmbH, a German Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

- ☒ **An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel 8760, Frames 0502, or for which a copy thereof is attached.**

Robert Bosch GmbH, assignee of U.S. Patent No. 6,074,694, consents to the filing of the present application for the reissue of U.S. Patent No. 6,074,694.


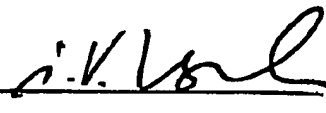
The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

Pursuant to 37 CFR §3.73(b) and MPEP §324, the undersigned hereby avers that the undersigned is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

9.4.2002

Date

 
Signature

Georg Müller

Manfred Knetsch

Typed or Printed Name

authorized corporate
officer

authorized
representative

Title

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